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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/531,539	04/15/2005	Berthold Koch	112857-444	1416
21832	7590	03/23/2007	EXAMINER	
MCCARTER & ENGLISH LLP CITYPLACE I 185 ASYLUM STREET HARTFORD, CT 06103			KIM, SUN U	
			ART UNIT	PAPER NUMBER
			1723	
SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE		
3 MONTHS	03/23/2007	PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/531,539	KOCH ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	John Kim	1723	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 22 January 2007.
- 2a) This action is **FINAL**.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 11-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 11-23 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 15 April 2005 is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
  1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
 Paper No(s)/Mail Date \_\_\_\_\_.
- 4) Interview Summary (PTO-413)  
 Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: \_\_\_\_\_.

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1. Claims 11-23 are objected to because of the following informalities: Delete a colon on line 1 of each of claims 11-23. Insert a period after a claim number on line 1 of each of claims 11-20. Replace a colon with a period after claim number in claim 23. Appropriate correction is required.
2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 11-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over McLain (US Pat. No. 3,422,008). McLain teaches a hollow fiber fluid separation module comprising an inlet (9), an outlet (11), a discharge port (12) and an access port (9'), a module axis and a plurality of hollow fibers (1); each of the fibers extending from the inlet (9) to the outlet (11) and comprising an interior communicating with the inlet (9) at one end of each hollow fiber and with the outlet (11) at the other end of each hollow fiber, with the hollow fibers being wound in multiple layers to form a hollow cylindrical coil (see figure 3), each layer being defined on its inner side by an imaginary cylinder and having a number of hollow fibers helically wound on the cylinder (2) with a certain helix angle, the fibers being in a clearance relationship with each other and equally spaced on the cylinder (2), with one layer differing from a neighboring layer by the fact that all the fibers of the one layer are inclined at the wind angle plus certain helix angle whereas all the fibers of the neighboring layer are at the wind angle minus certain helix angle and each fiber being wrapped around 360 degrees at least once around the associated cylinder

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and being laid down to be frictionally held to the crosswise disposed fibers lying underneath and inherently not to have their inner cross section noticeably restricted (see figures 3, 9; col. 4, lines 53-59; col. 5, lines 35-72; col. 9, lines 22-46). McLain teaches that an additional inlet (9') is provided to pass a fluid to a fiber bundle to sweep away fluid which has permeated through fiber walls (see figure 9; col. 9, lines 36-46). Claim 11 essentially differs from the hollow fiber fluid separation module of McLain in reciting that each fiber is laid down during winding with a tensile strain of at least 10 g. McLain teaches that fibers are arranged in a crisscross configuration wherein fibers cross each other and in contact with each other but minimizing contact area between adjacent parallel fibers (see figure 3; col. 4, lines 53-59; col. 7, lines 24-30). Desired tensile strain of each fiber being laid down during winding such as at least 10 g would have been obvious to a person of ordinary skill in the art so long as to keep the fibers intact in crisscross configuration to withstand large pressure differentials in spite of very thin walls of the fibers as suggested by McLain (see col. 4, lines 16-22, 53-59).

Regarding claim 12, McLain teaches that the first, lowermost layer (1) is located on a tube (2) that forms the imaginary cylinder of the layer (see Fig. 5).

Regarding claim 13, McLain teaches axial bores i.e. holes in tube (2) (see figure 9).

Regarding claim 14, McLain teaches that the wind angle is at least 30 degrees (see col. 5, lines 63-66).

Regarding claim 15, McLain discloses that the distance between two hollow fibers of one layer (1') ranges between onefold and tenfold the inner radius of hollow fibers (see Fig. 3).

Regarding claims 16-17, all of the fibers of McLain has same length and built according to the same design principle (see Fig. 3-5).

Regarding claims 18 and 21-22, the free inner cross section of hollow fibers of McLain at the intersections is inherently more than 98% to allow fluid through the fibers since contact between adjacent parallel fibers are minimized and hollow fibers are capable of withstand large pressure differentials (see col. 4, lines 16-22, 53-59).

Regarding claims 19 and 23, McLain discloses that the outermost layer of the winding is enclosed by a perforated cylinder which inherently provides access via an inlet (9) for fluid flow (see col. 7, lines 13-19). Recitation of "for permeate flow" in claim 19 and "for circulation gas" in claim 23 is an intended use of access or exit means. It has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQ2d 1647 (1987).

Regarding claim 20, McLain discloses sectioned planes of perform module (2) (see Figs. 10-11; col. 9, lines 52-72).

4. Applicant's arguments with respect to claims 11-23 have been considered but are moot in view of the new ground(s) of rejection. Applicants argue that the fibers of McLain are not deformed. However, desired strain of fibers being laid down during winding such as at least 10 g is within the person of ordinary skill in the art so long as to keep the fibers intact in crisscross configuration to withstand large pressure differentials in spite of very thin walls of the fibers as suggested by McLain (see col. 4, lines 16-22, 53-59). Such amount of strain would have resulted in a partial deformation of fibers at the point of intersection of crisscrossing fibers. McLain's teaching of minimizing the contact area between adjacent fibers (col. 4, lines 53-59) are pertain to adjacent parallel fibers rather than crisscrossing fibers.

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5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Kim whose telephone number is 571-272-1142. The examiner can normally be reached on Monday-Friday 7 a.m. - 3:30 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on 571-272-1189. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

*John Kim*  
**John Kim**  
**Primary Examiner**  
**Art Unit 1723**

JK  
3/22/07